

B-5 DUST CONTROL**PURPOSE & APPLICATIONS**

Dusty conditions occur when a disturbed site or road surface has dried out. Soil fines can actually shrink due to moisture loss which, in turn, loosens and weakens the soil surface. It is necessary to prevent the blowing and movement of dust from exposed soil surfaces, and reduce the presence of dust. Dust can cause off-site damage, be a health hazard to humans, wildlife and plant life, or become a traffic safety hazard. This practice is applicable to areas subject to dust blowing and soil movement where on-site and off-site damage is likely to occur if preventive measures are not taken. Water or calcium chloride can help to control dusting by preserving the moisture level in the road surface materials.

- A gravel road surface may lose one half inch of material per year resulting in a significant cost.
- This material which is mostly fine soils is essential in maintaining the integrity of a gravel road surface. Soil fines are the binders that hold the road surface material in a tight, hard mass and the fewer the fines, the looser the gravel, which adversely affects traction and can result in washboarding.

CONSIDERATIONS

- Use traffic control to restrict traffic to predetermined routes.
- Maintain as much natural vegetation as is practicable.
- Use phasing of construction to reduce the area of land disturbed at any one time.
- The use of temporary mulching, permanent mulching, temporary vegetative cover, permanent vegetative cover, or sodding will reduce the need for dust control.
- Use mechanical sweepers on paved surfaces where necessary to prevent dust buildup. Stationary sources of dust, i.e., rock crushers, should utilize fine water sprays to control dust.

SPECIFICATIONS

Water: The exposed soil surface should be moistened periodically with adequate water to control dust.

Calcium Chloride: A commercial chemical product that is either loose dry granules or flakes and to be used only when other methods are not practical. The flakes are fine enough to feed through a spreader at a rate that will keep the surface moist but not cause pollution or plant damage.

Liquid applications are more cost-effective on larger sites and the application rate will vary, depending on the relative quality of materials in a given road surface. Some calcium chloride suppliers may require a road sample before recommending an application rate. Generally, 30% calcium chloride is recommended for most gravel roads.

Stone: Cover surface with crushed stone or coarse gravel. In areas adjacent to waterways, use only chemically stable aggregate.

Other Products: There are now other products that are available to stabilize roads. These have not been tested in the state however; the DEP would entertain their use. However, it is the contractor's ultimate responsibility to mitigate dust and soil loss.

MAINTENANCE

When temporary dust control measure are used, repetitive treatment shall be applied as needed to accomplish control.

